

▲ Model 127NR

The Model 127NR is used in conjunction with a smaller, parallel valve in those systems that must provide both normal usage and fire flow. The small valve provides normal flow at a lower outlet pressure. The 127NR provides fire flow at a higher outlet pressure.

## SERIES FEATURES

- ▶ Valve remains closed during normal usage
- ▶ Automatically opens on a drop in downstream pressure
- ▶ Provides fire flow at higher outlet pressure
- ▶ Trip point and outlet pressure are both adjustable
- ▶ Adjustable opening/response speed
- ▶ Valve is manually reset to return to normal flow
- ▶ Can be maintained without removal from the line
- ▶ Factory tested and can be pre-set to your requirements

## OPERATION

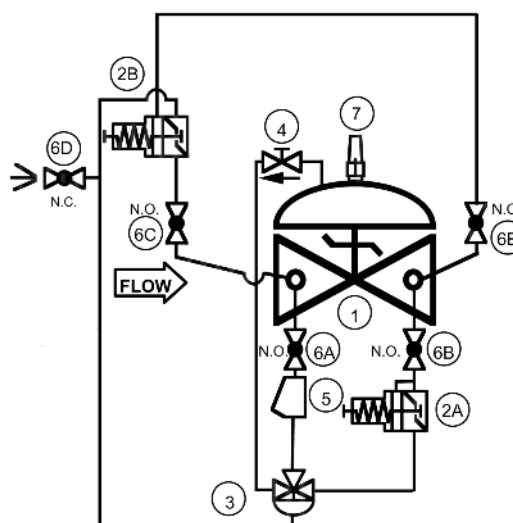
During normal conditions a smaller, parallel valve controls downstream pressure. This pressure is above the trip set point of the 127NR, thus keeping it closed. A drop in downstream pressure, caused by fire demand, will cause the 127NR to trip open and come under control of its pressure reducing pilot, set at a higher pressure than the parallel valve. When fire service has ceased the valve must be manually reset for normal conditions.

## COMPONENTS

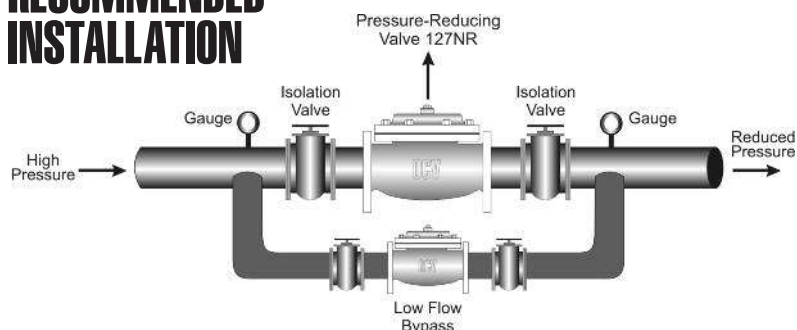
The Model 127NR consists of the following components, arranged as shown on the schematic diagram:

- 1.) Model 65 Basic Control Valve
- 2.) Model 1340 Pressure Reducing Pilot
- 3.) Model A224 Accelerator Pilot
- 4.) Model 141-3 Flow Control Valve (opening speed control)
- 5.) Model 159 Y-Strainer
- 6.) Model 141-4 Isolation Ball Valve
- 7.) Model 155 Visual Indicator (Optional)

## SCHEMATIC



## RECOMMENDED INSTALLATION



- Install the valve with adequate space above and around the valve to facilitate servicing. Refer to the Dimension table.
- Valve should be installed with the bonnet (cover) at the top, particularly 8" (DN200) and larger valves, and any valve with a limit switch.
- Fire flow bypass valves should be installed upstream and downstream of the control valve. These are used to isolate the valve during startup and maintenance.

## SIZING

Sizing is a critical issue in the selection of pressure reducing valves. Definitive sizing information can be found in the OCV Catalog, Series 127 section and Engineering section Performance Charts. Consult the factory for assistance and a copy of the OCV ValveMaster Sizing program.

## MAXIMUM PRESSURE

(The pressures listed here are maximum pressures at 37.78°C.)

END CONNECTIONS	DUCTILE IRON	STEEL/STN STL	BRONZE
Threaded	44.1bar	44.1bar	34.4bar
Grooved	20.6bar	20.6bar	20.6bar
150# Flanged	17.2bar	19.6bar	15.5bar
300# Flanged	44.1bar	51.0bar	34.4bar

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 email: sales@controlvalves.com • website: www.controlvalves.com

## SIZES

### GLOBE/ANGLE

Screwed Ends - 1 1/4" - 3" (DN32 thru DN80)  
Grooved Ends - 1 1/2" - 6" (globe) (DN40 thru DN150)  
1-1/2"-4" (angle) (DN40 thru DN150)  
Flanged Ends - 1 1/4" - 24" (globe); (DN32 thru DN600)  
1 1/4" - 16" (angle) (DN32 thru DN400)

### FLUID OPERATING TEMPERATURE RANGE

(Valve Elastomers)

Buna-N 0°C to 82.22°C\*, EPDM 0°C to 110°C\*

### SPRING RANGES

Trip setting: 0.3 - 2.0 bar, 1.3 - 5.5 bar, 1.38-13.79 bar, 6.8 - 20.6 bar

Outlet setting: 0.3 - 2.0 bar, 1.3 - 5.5 bar, 1.38-13.79 bar, 6.8 - 20.6 bar

### MATERIALS (consult factory for others)

**Body/Bonnet:** Ductile Iron (epoxy coated), Carbon Steel (epoxy coated), Stainless Steel, Bronze

**Seat Ring:** Bronze, Stainless Steel

**Stem:** Stainless Steel, Monel

**Spring:** Stainless Steel

**Diaphragm:** Nylon Reinforced Buna-N, EPDM\*

**Seat Disc:** Buna-N, EPDM\*

**Pilot:** Bronze, Stainless Steel

**Other pilot system components:** Bronze/Brass, All Stainless Steel

**Tubing & Fittings:** Copper/Brass, Stainless Steel

\*Others available upon request

## SPECIFICATIONS

The fire flow bypass valve shall function to control downstream pressure under fire flow conditions when tripped. Manual reset shall be required to return to normal conditions.

### DESIGN

The fire flow bypass valve shall be a single-seated, line pressure operated, diaphragm actuated, pilot controlled globe valve. The valve shall seal by means of a corrosion-resistant seat and a resilient, rectangular seat disc. These, and other parts, shall be replaceable without removing the valve from the line. The stem of the main valve shall be guided top and bottom by integral bushings. Alignment of the body, bonnet and diaphragm assembly shall be by precision dowel pins. The diaphragm shall not be used as a seating surface, nor shall the pistons be used as an operating means. The pilot system shall be furnished complete and installed on the main valve. It shall include an opening speed control, Y-strainer, low pressure opening pilot system, pressure reducing pilot and isolation ball valves. The fire flow bypass valve shall be operationally and hydrostatically tested prior to shipment.

### MATERIALS OF CONSTRUCTION

The main valve body and bonnet shall be ductile iron. All ferrous surfaces shall be coated with 4 mils of epoxy. The main valve seat ring shall be bronze. Elastomers (diaphragms, resilient seats and O-rings) shall be Buna-N. The control pilot shall be bronze. The opening speed control and isolation ball valves shall be brass while the control line tubing shall be copper.

### OPERATING CONDITIONS

The fire flow bypass valve shall be suitable for reducing inlet pressures of <X to X> bar to a constant outlet pressure of <X> bar at flow rates ranging from <X to X> M<sup>3</sup>/HR.

### ACCEPTABLE PRODUCTS

The fire flow bypass valve shall be a <size> Model 127NR, <globe pattern, angle pattern>, with <150# flanged, 300# flanged, threaded, grooved> end connections, as manufactured by OCV Control Valves, Tulsa, Oklahoma, USA.

### METRIC DIMENSIONS-M.M.

DIM	END CONN	DN32 & DN40	DN50	DN65	DN80	DN100	DN150
A	SCREWED	222	251	267	330		
	GROOVED	222	251	267	330	387	508
	150# FLGD	216	238	267	305	381	451
	300# FLGD	222	251	283	324	397	473
C ANGLE	SCREWED	111	121	152	165		
	GROOVED	111	121	152	165	194	
	150# FLGD	108	121	152	152	191	254
	300# FLGD	111	127	162	162	198	267
D ANGLE	SCREWED	79	98	102	114		
	GROOVED	79	98	102	114	143	
	150# FLGD	76	98	102	102	140	152
	300# FLGD	79	105	111	111	148	165
E	ALL	152	152	178	165	203	254
F (OPT)	ALL	98	98	98	98	98	98
H	ALL	254	279	279	279	305	330

\*GROOVED END NOT AVAILABLE IN DN32

For maximum efficiency, the OCV control valve should be mounted in a piping system so that the valve bonnet (cover) is in the top position. Other positions are acceptable but may not allow the valve to function to its fullest and safest potential. In particular, please consult the factory before installing 8" (DN200) and larger valves, or any valves with a limit switch, in positions other than described. Space should be taken into consideration when mounting valves and their pilot systems.

A routine inspection & maintenance program should be established and conducted yearly by a qualified technician. Consult our factory @ 1-888-628-8258 for parts and service.

### How to order your Model 127NR valve

When Ordering please provide:

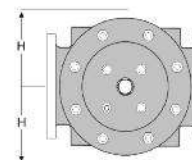
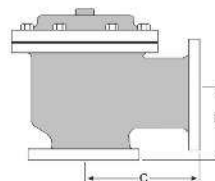
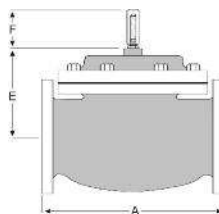
Fluid to be controlled - Model Number - Size

Globe or Angle - End Connection

Body Material - Trim Material - Pilot Options

Pressure Settings (trip setting & outlet pressure)

Special Requirements / Installation requirements



Represented by:

QUALITY SYSTEM  
REGISTERED TO  
ISO 9001

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